

March 16, 1965

Central Intelligence Agency  
2430 E Street, N.W.  
Washington 25, D. C.

Subj: AP/3 Stereoplotter

Gentlemen:

We wish to present to you an unsolicited proposal for furnishing you a stereoplotting system which we hope will be of interest to you. This system is known as the  Analytical Stereoplotter, AP/3.

The Model AP/3 system is basically a further development of the concepts embodied in the now standard AP/2 instrument which is being procured by the U. S. Air Force and the U. S. Army.

We feel that with a certain degree of developmental work additional capabilities can be added to the heretofore AP/2 system which will greatly enhance the capabilities of this system.

More specifically, the performance characteristics of the proposed development will not only meet the existing performance specifications for the AP/2 system (military terminology: AS-11A system) but, in addition, will have the following capabilities.

The optical magnifications available will range up to at least 100X with a resolution not less than 4 lines per mm per unit power of magnification.

The optical system will include manually controlled anamorphic correction devices with a range not less than one to two.

The accuracy of the system shall be designed to attain a RMSE of 4 microns or less over the entire area of a 9" x 9" aerial photograph and over areas of 2" x 2", an RMSE of 2 microns or better.

The system shall be capable of stereoplotting with aerial frame photography, aerial panoramic photography and terrestrial frame photography. Programs for focal lengths from 1" to 48" with photography formats up to 9" x 9" will be provided.

- 2 -

Although the system will be capable of utilizing and exploiting strip photography, no programs for this operation will be provided under the quoted price. A program for strip photography can be provided subsequently when the geometry is more thoroughly clarified.

Provision will be provided to punch or type out model coordinates or photo coordinates as desired. These coordinates may be actual current values or the average of several readings up to a total of at least five readings of any point. Panel controls will be provided to select the desired output.

The programs provided will calculate three dimensional vector distance,  $D_m$ , between any two points in the stereo model. Each point may be the average of several readings of the coordinates of that point if desired. It shall be possible to print out in punch or type the quantity  $D_m$ .

A Model 35 Teletype printer with keyboard will be provided. The ASA standard tape code will be employed.

The AP/3 will be provided with a 50-character per second, mechanical tape reader and a mechanical tape punch which will have an output of 20 characters per second.

The coordinatograph, or X-Y plotter, will be driven by servo motors. A ball screw drive will be utilized, if feasible, to ensure optimum high speed performance.

The Veltropolo device will be digital in nature, similar to that used on the Model AP/C Analytical Stereoplotter. This will provide greater accuracy and control of the Veltropolo device.

The general appearance, both as to size and format, of the AP/3 system will be similar to the AP/2 system with the exception that an additional computer cabinet will be required to house additional computer circuitry. However, should image-correlation circuitry be added at a later date, which may be possible as a retrofit, no additional cabinet will be required to house the correlation circuitry.

The above stated performance characteristics are in addition to those stated in the attached specification for the AP/2 system. It is understood that the AP/3 system will meet all requirements of the AP/2 system in addition to the additional performance to be developed for the AP/3 system. Naturally where such developments represent improvements on the AP/2 design, the lesser desired AP/2 characteristics will not also be provided.

- 3 -

The cost of the first developed AP/3 system is [ ] delivered and installed at any site in the Washington, D.C. area, not including U. S. Customs or taxes, if any. Delivery of the system can be made ten months after receipt and acceptance of order. Additional program documentation and manuals describing the theory of operation and maintenance of the equipment will be delivered twelve months after receipt of order. This quotation will remain valid until 1 April 1965.

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We would be pleased to consider any suggestions or revisions of the technical characteristics which you might have in mind. Naturally, such revisions would affect the quoted price either upwards or downwards. Please note that no quotation was made for automation of the system which would be perfectly feasible at additional cost. It will also be possible to add on such automation at a later date, as a retrofit, with minimum difficulty.

We hope to have the pleasure of hearing from you in the near future.

Sincerely yours,

[ ]  
Executive Vice President

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SJF:en

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(When Filled In)

**TECHNICAL BACKGROUND PROCUREMENT INFORMATION**

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**I. Contractor**

A. Name and address

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B. Evaluation of previous performance:                      has a good performance

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record based on previous contracts and has demonstrated that they will  
stand behind their products.

II. Brief description of this procurement: AP/9 Analytical PlotterEstimated total amt.                     

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A. Deliverable items: On each of 8 X 9 1/2" stereo copiers, one special  
purpose computer, one plotting table, instruction manuals, and computer  
programs.

B. Is this procurement for other than a standard, "off the shelf" or slightly  
modified commercial item? Yes If "yes", is it anticipated that  
any more of this unit will be procured? No If so, a complete  
set of directly reproducible manufacturing drawings and specifications  
would normally be included in this procurement. Comments: This

program is for a modified version of OMI's production model AP/2.

C. Will contract cover a period of more than 90 days? Yes  
If "yes", are progress reports desired? Yes If so, indicate fre-  
quency, content and number of copies desired:                     

D. Is any Government-owned property to be provided to the contractor?

No If so, list and indicate its availability (where, when,  
etc.)                     

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E. Is any special tooling involved? No

F. Security:

1. Association with the Sponsor is Unclassified
2. The specifications and/or drawings are Unclassified
3. The item is Unclassified
4. Contractor personnel known to be aware of this proposed procurement:

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5. Other security information

III. Reasons for selection of this source. If other sources were considered, indicate results. If no other sources were considered, list the reasons why this firm is considered to be uniquely qualified to perform this work.

25X1  currently markets a model AP/2 Analytical Plotter. This program is to take the basic AP/2 concept and appropriate hardware and develop an advanced model, known as the AP/3. Since the  has the AP/2 as a preparatory shelf item, it is not practical to attempt to have another manufacturer develop the AP/3.

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IV. If contract will cover deliverable item(s) state room location where equipment will be installed 25322. (It is extremely important that the Engineering Data Sheet including room location and any other pertinent facts be submitted to NPIC Engineering Section as far as possible in advance of delivery.)

V. Technical contact

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In the event additional space is required, use the reverse side(s) of this form, with a reference to the item number to which the comment applies.

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NPIC PROJECT NO.

JAN 18 8 11 PM '65

UNCLASSIFIED JAN 15 3 20 PM '65  
CLASSIFICATION

RECEIPT OCB/OS

DISSEMINATED OCB/OS

## SUPPORT/SERVICE REQUIREMENT

(The following info is required when rqmts are levied by external organizations)

OFFICE \_\_\_\_\_ DATE OF RQMT \_\_\_\_\_ CONTROL NO. \_\_\_\_\_  
NPIC DIV/DETACH PROCESSING RQMT \_\_\_\_\_ PROJ OFF \_\_\_\_\_ PHONE \_\_\_\_\_  
SUPPORT REQUESTED OF \_\_\_\_\_ PRIORITY \_\_\_\_\_ DATE REQUIRED \_\_\_\_\_

(The following info is required when rqmts are levied for internal support)

DIV/STAFF P&DS \_\_\_\_\_ DATE OF RQMT 21 Dec '64 \_\_\_\_\_ CONTROL NO. \_\_\_\_\_  
SUPPORT REQUESTED OF TID \_\_\_\_\_ PROJ OFF \_\_\_\_\_ 25X1  
PRIORITY \_\_\_\_\_ DATE REQUIRED 31 January 1967

## 1. BACKGROUND INFORMATION:

- The work requested is in support of a departmental: ☐ Photo interpretation proj.;  
☒ Non-photo interpretation project. It will result in: ☐ Hard copy report;  
☐ Informal report (memo); ☒ Basic service only.

Project Description: AP-3 Stereo Comparator

2. SPECIFIC SUPPORT/SERVICE REQUESTED: Support from NPIC will probably consist of:  
☐ Photographic; ☐ Reproduction; ☐ Mensuration; ☐ Graphics; ☐ ADP; ☐ Editing;  
☒ Other (explain below) -- (Include statement as to estimated amount of work required  
of support component(s); i.e., number of contact prints, enlargements, boards, etc.)

Determine TIDs requirements for a AP-3. Obtain proposals, evaluate and write PAR.  
Monitor contract and obtain acceptance and evaluation statement from TID upon  
completion.

3. URGENCY JUSTIFICATION: (If immediate support is required a statement of justification  
must be made on this form.)

DATE OF COMPLETION

UNCLASSIFIED  
CLASSIFICATION

NPIC FM 218 (4-64)